

DIVISION 7 - THERMAL/MOISTURE PROTECTION

SECTION 07920 - SEALANTS AND CALKING

PART 1 - GENERAL

1.01 - DESCRIPTION

- A. For other requirements see General Conditions and General Requirements (Division 1).
- B. SCOPE OF WORK
Provide colored silicone sealant and backing materials where required to seal joints between different materials. Work includes but is not limited to, sealing joints in new penetrations at existing walls.

1.02 - QUALITY CONTROL

- A. QUALIFICATIONS
Installer must be experienced in the installation of sealants for not less than five (5) years. Must be approved by EPA's On-Site Representative and sealant manufacturer.
- B. Manufacturer to submit copies of testing reports by independent laboratory if required by EPA's On-Site Representative.

1.03 - REFERENCE STANDARDS

The following publications of the issues listed below, but referred to hereinafter by basic designation only, form a part of this specification to the extent indicated by the references thereto.

- A. FEDERAL SPECIFICATIONS (FS)

TT-S-00227E(3) Sealing Compound: Elastomeric Type, Multi-Components (For Calking, Sealing, and Glazing in Buildings and Other Structures).

TT-S-00230C(2) Sealing Compound: Elastomeric Type, Single Component (For Calking, Sealing, and Glazing in Buildings and Other Structures).

1.04 - BUILDING CODES AND INSPECTIONS

- A. To follow Michigan Building Code requirements.

- B. To comply with 'UL' U900D requirements when in fire-rated walls or partitions.

1.05 - COORDINATION

- A. Contractor to schedule the work with all Contractors, the EPA and others affected by this work.

1.06 - TESTING

- A. Contractor to do field adhesion testing to substrate if required by EPA's On-Site Representative or Engineer.

1.07 - JOB CONDITIONS

- A. ENVIRONMENTAL CONDITIONS
Performance of joint sealing work is subject to the more stringent of the following environmental conditions and manufacturer's recommendations.
 - 1. Temperature: Perform all work within temperature range of 40 and 85 degrees F.
 - 2. Moisture: Do not work when moisture is present or when surfaces to be sealed are wet.

1.08 - DELIVERY, STORAGE & HANDLING

- A. Deliver materials to site in original sealed and labeled containers bearing manufacturer's name, brand name, date of manufacture and color designation.
- B. Store materials in a well ventilated space maintained at temperatures below 75 degrees F unless stricter controls required by manufacturer.

1.09 - SUBMITTALS

- A. SAMPLES
Submit samples of each color and type of sealant proposed for use on the Work; obtain approval by EPA's On-Site Representative before proceeding.
- B. PRODUCT DATA
Submit copies of tests and other product data verifying conformance with specified performance characteristics.
- C. COLOR
EPA's On-Site Representative to select colors. Color to match adjacent surface colors, unless otherwise required.

PART 2 - PRODUCTS

2.01 - MATERIALS

- A. SILICONE SEALANT
Provide high performance silicone sealants for ALL exterior joints above grade.
 - 1. PRODUCTS ACCEPTABLE

Dow #790 or "Silpruf" by General Electric Co., one-part silicone sealant complying with requirements of FS TT-S-230C, Type II, Class A, FS TT-S-001543A, Class A.
- B. CALKING
One-component acrylic-latex non-staining, non-bleeding compound, for interior application above grade, to comply with ASTM C834, suitable for painting.
 - 1. PRODUCTS ACCEPTABLE
Sonolac by Sonneborn.
Pecora AC-20 by Pecora Chemical.
- C. ACOUSTICAL CALKING
"Tremco" acoustical sealant to be used in all acoustical insulated partitions and ceilings.
- D. OTHER JOINT SEALING MATERIALS
Provide the following accessory joint sealant materials:
 - 1. PRIMER
Provide primer material made or recommended by the sealant manufacturer for the conditions and substrates of the application.
 - 2. BACKING MATERIAL
 - a. Expanded closed cell polyethylene; not less than 2 pcf, 20 psi minimum tensile strength; size maximum 25% larger than width of joint. Provide rod or slab forms as indicated on drawings.
 - b. "Denver Foam" by Backer Rod Manufacturing and Supply Company, Denver, Colorado, or approved equal. Open cell polyurethane foam; non-gassing; non-staining; 6 pcf maximum density; size minimum 25 % and maximum 75 % larger than joint-size.

PART 3 - EXECUTION

3.01 - PREPARATION

- A. Obtain manufacturer's instructions for sealant installation.
- B. INSPECTION
Installer must examine substrate and conditions under which sealant work is to be performed and must notify Contractor in writing of unsatisfactory conditions. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to installer.

3.02 - INSTALLATION

- A. GENERAL
Mix and apply sealant materials in strict accordance with manufacturer's instructions and approved shop drawings.
- B. PREPARATION
Clean joint surfaces free from dirt, dust and any other contaminants affecting bond of the sealant material.
 - 1. PRIMING
Apply primer to contact surfaces as recommended by sealant manufacturer.
 - 2. BACKING
Provide backing materials in as long lengths as practicable; install with proper tool, forcing backing into joint to proper depth for sealant.
 - a. Provide open-cell type backing at all vertical or face joints above grade.
 - b. Provide closed-cell type backing at all horizontal or paving joints and all joints below grade.
- C. APPLICATION
Apply sealant over backing to uniform thickness in continuous beads, filling all joints and voids solid; superficial pointing with skim bead will not be accepted. After application, tool surface to achieve complete adhesion and contact; leave surface of sealant slightly concave. Provide bond breaking between backer rod and sealant as required by sealant manufacturer. Mask adjacent surfaces as required.

D. ACOUSTICAL SEALANTS

Contractor to caulk around all penetrations through all acoustical partitions or ceilings and around all conduit, electrical boxes, etc.

3.03 - CLEAN-UP

- A. Upon completion, remove and dispose of masking materials; remove all excess sealing materials; clean adjacent surfaces of all soil and stain resulting from sealing operations.
- B. Contractor to remove materials leftover, tools, scaffolding, etc. from property after completion of the work.
- C. Contractor to clean all spillage of materials over ALL adjacent surfaces to the satisfaction of the EPA's On-Site Representative and Engineer.

3.04 - GUARANTEE

- A. Twenty (20) years minimum after FINAL acceptance of the WHOLE project by the EPA.
- B. Guarantee to cover labor and materials, including any additional work required to correct the work.

END